

The sources of water include rivers, lakes, streams, ponds, reservoirs, springs and wells. As water travels over the surface of the land or through the ground, it dissolves naturally occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

- Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations and wildlife.

- Inorganic contaminants, such as salts and metals, which can be naturally occurring or result from urban stormwater runoff, industrial or domestic wastewater discharges, oil and gas production, mining or farming.

■ **Pesticides and herbicides**, which may come from a variety of sources such as agriculture, urban stormwater runoff and residential uses.

■ Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum

production, and can also come from gas stations, urban stormwater runoff and septic systems.

- Radioactive contaminants, which can be naturally occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Environmental Protection Agency (EPA) prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. The Food and Drug Administration (FDA) regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the EPA's Safe Drinking Water Hotline at 1-800-426-4791, or by visiting their website at www.epa.gov/safewater.

Radon

Radon 222, or radon for short, is a colorless, odorless gas that occurs naturally in soil, air and water. Radon is formed from the radioactive decay products of natural uranium that is found in many soils. Most radon in indoor air comes from the soils below the foundation of the home, and in some locations can accumulate to dangerous levels in the absence of proper ventilation. In most homes, the health risk from radon in drinking water is very small compared to the health risk from radon in indoor air. For more information, call the EPA's Radon Hotline at 1-800-SOS-RADON.

In October 1999, the EPA proposed a Maximum Contaminant Level of 300 pCi/L or an alternative maximum contaminant level (AMCL) of 4000 pCi/L for radon. The AMCL requires development of a multimedia mitigation (MMM) program, which also addresses radon exposure from indoor air. Action on a final rule is pending.

Cryptosporidium

In April of 1993, the cryptosporidiosis outbreak in Milwaukee, Wisconsin alerted water utilities to the potential threat that this protozoan organism presents to public water supplies. There were an estimated 400,000 cases of diarrhea and several deaths associated with the disease in severely immuno-compromised persons. This organism is primarily associated with surface water sources.

Although the MDWASD uses the Biocayne Aquifer as a source of supply, the State has raised the issue that some groundwater sources may be under the direct influence of surface water (UDI) and therefore, are susceptible to the *Cryptosporidium* organism. As a result of the UDI issue and the sensitivity of the immuno-compromised, the MDWASD first tested for *Cryptosporidium* in 1993 and has continued testing monthly since 1994. To date, neither *Cryptosporidium* nor *Giardia* – another protozoan – have been found in the source water supplying the MDWASD's water treatment plants.

Nitrate

Although the level of nitrate (refer to the table on water quality data) is consistently below the health effect level, the EPA requires the following information be included in this report: "Nitrate in drinking water at levels above 10 ppm is a health risk for infants of less than six months of age. High nitrate levels in drinking water can cause blue-baby syndrome. Nitrate levels may rise quickly for short periods of time because of rainfall or agricultural activity. If you are caring for an infant, you should ask advice from your health care provider."

Lead

There are no detectable levels of lead in the water supplied by the MDWASD. Research has shown, however, that infants and young children are typically more vulnerable to lead in drinking water than the general population. It is possible that lead levels at your home may be higher than at other homes in the community because of materials used in your home's plumbing. If you are concerned about elevated lead levels in your home's water, you may flush your tap for 30 seconds to two minutes before using tap water. You may also wish to have your water tested by an independent laboratory. Additional information is available from the Safe Drinking Water Hotline (1-800-426-4791).

Water—Our most precious resource, Save it!

The Miami-Dade Water and Sewer Department (MUWASD) is pleased to present our Annual Water Quality Report. This report is designed to inform you about the water we deliver to you every day.

Our primary goal is to provide a safe and dependable supply of drinking water. We want you to understand the constant efforts we make to improve the water treatment process and to protect our water resources.

The MDWASD routinely monitors for contaminants in your drinking water according to Federal and State laws, rules and regulations. Except where indicated otherwise, this water quality report is based on the results of our monitoring for the period of January 1, 2004 to December 31, 2004. As you

2004

can see from the tables, our system has had no violations. The Department is proud to report that your drinking water meets or exceeds all federal and state requirements.

This report reflects the hard work and dedication of our employees who ensure water delivered from the MDWASD's facilities meets all standards for safety, reliability and quality. We are committed to providing you this information about your water supply because customers that are well informed are our best supporters in any improvements necessary to maintain the highest drinking water standards. If you have any questions or concerns about the information provided, please feel free to call any of the numbers listed in this brochure.

Feel free to call us at any of the numbers listed below:

Public Affairs: 786-552-8088

Alexander Orr Laboratory: 305-275-3170
(Residents south of Flagler Street)

John E. Preston Laboratory: 305-520-4738
(Residents north of Flagler Street)

You may also get some of your questions answered on our website www.miamidade.gov/wasd.

For additional sources regarding water quality or health effects information in the local area, residents are encouraged to call the Department of Environmental Resources Management at (305) 372-6524 or the Florida Department of Health's Miami-Dade County Environmental Health Office at (305) 623-3500. Also, the Miami-Dade County Board of County Commissioners, charged with making decisions relating to the Department, meets regularly on Tuesdays and Thursdays at the Stephen P. Clark Center located in downtown Miami.

Landlords and businesses are encouraged to share this report with non-billed water users. Additional copies for posting in common areas or on bulletin boards are available. Call MDWASD's Public Affairs Office at (786) 552-8088.

ESTE FOLLETO CONTIENE INFORMACION MUY IMPORTANTE SOBRE SU AGUA POTABLE. TRADUZCALO O HABLE CON ALGUIEN QUE LO ENTENDA BIEN SI USTED PREFERE RECIBIR ESTE FOLLETO EN ESPAÑOL. POR FAVOR LLAME AL TELEFONO (800) 562-6000.

ЭТОТ ЛОЖЕТ СОДЕРЖИТ ВАЖНУЮ ИНФОРМАЦИЮ О ВАШЕЙ ВОДНОЙ СИСТЕМЕ. ЕСЛИ ВЫ НЕ ПОНИМАЕТЕ АНГЛИЙСКОГО ЯЗЫКА, ПОЖАЛУЙСТА, ПОЗВОНИТЕ ПО ТЕЛЕФОНУ (800) 562-6000.

Where does Miami-Dade get its **drinking water**?

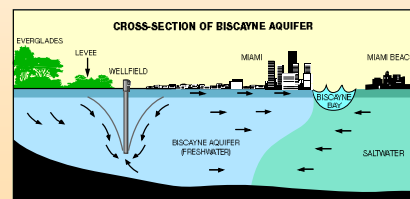
In Miami-Dade County, water is pumped from the Biscayne Aquifer to MDWASD's water treatment facilities: Hialeah, John E. Preston, Alexander Orr and the South Dade Water Supply System.

In general, the Hialeah and John E. Preston plants treat water that is supplied to residents who live north of Flagler Street up to the Miami-Dade/Broward Line. The Alexander Orr Plant serves residents south of Flagler Street down to SW 264 Street. The three regional water plants supply treated water to a common distribution system, which runs throughout most of Miami-Dade County. Water from these plants receives lime treatment to reduce hardness, and is then disinfected, fluoridated and filtered.

The South Dade Water Supply System is comprised of five smaller water treatment plants that serve residents south of SW 264 Street in the unincorporated areas of the county. These five plants pump treated water in a common distribution system, which is separate from the main system. Water from these plants is disinfected and stabilized for corrosion control. Highly trained microbiologists, chemists

and water treatment specialists conduct or supervise more than 100,000 analyses of water samples each year. Water quality samples are collected throughout the county and tested regularly. Samples include untreated and treated water taken at our facilities, sample sites throughout the service areas and at customers' homes. These tests are overseen by various federal, state and local regulatory agencies.

ing water based on taste and appearance and may notice that water delivered to residents in the northern part of the county has a yellow tint. Water in this area originates from a region of the Biscayne Aquifer that contains organic material. These natural substances increase the color of the water, but present no danger to health. Modifications to the treatment process that will reduce the color in the water are currently underway.



Listed below are 21 parameters detected in Miami-Dade County's water during the reporting period. All are below maximum contaminant levels allowed. Not listed are many others we test for, but that were not detected. Unless otherwise noted, all parameters were tested in 2004

Miami-Dade Water & Sewer Department

2004 Water Quality Data

PARAMETER	FEDERAL MCL (a)	FEDERAL GOAL (b)	STATE MCL	YEAR TESTED	MAIN SYSTEM	SOUTH DADE WATER SUPPLY SYSTEM	AVENTURA/ NORWOOD	MAJOR SOURCES
MICROBIOLOGICAL CONTAMINANTS								
Total Coliform Bacteria (c)	5%	0	5%	04	0.2%	0%	0%	Naturally present in the environment
DISINFECTION BYPRODUCTS								
Total Inhalomethanes (ppb) (d)	80	NE	80	04	14 (ND - 33)	20 (6 - 80)	6 (5 - 9)	Byproduct of drinking water chlorination
Halooacetic Acids (ppb) (d)	60	NE	60	04	20 (ND - 49)	7 (ND - 16)	10 (3 - 12)	Byproduct of drinking water chlorination
DISINFECTANTS								
Chloramines (ppm)	MHUL=4 MRULG=4 MRDL=4			04	2.3 (1.9 - 2.7)	N/A	2.5 (0.5 - 4.0)	Water additive used to control microbes
Chlorine (ppm)	MFOL=4 MRDLG=4 MRDL=4			04	N/A	1.3 (1.1 - 1.6)	N/A	Water additive used to control microbes
VOLATILE ORGANIC CONTAMINANTS								
cis-1,2-Dichloroethylene (ppb)	70	70	70	04	ND	ND	1 (0 - 1)	Discharge from industrial chemical factories
INORGANIC CONTAMINANTS								
Arsenic (ppb)	50	NE	50	02(h)	1 (0.6 - 1)	1 (0.5 - 1)	ND	Erosion of natural deposits
Barium (ppm)	2	2	2	02(h)	0.008 (0.007 - 0.008)	0.032 (0.014 - 0.032)	ND	Erosion of natural deposits
Chromium (ppb)	100	100	100	02(h)	0.2 (0.1 - 0.2)	ND	ND	Erosion of natural deposits
Copper (ppm) (e)	AL = 1.3	1.3	AL = 1.3	02(03f)	0.08, 0 homes out of 111 (0%) exceeded AL	1.0, 1 home out of 37 (2.7%) exceeded AL	0.12, 0 homes out of 100 (0%) exceeded AL	Corrosion of household plumbing systems
Fluoride (ppm)	4	4	4	02 (g)	0.9 (0.7 - 0.9)	0.1	0.9 (0.8 - 1.1)	Erosion of natural deposits; water additive which promotes strong teeth
Lead (ppb) (e)	AL = 15	0	AL = 15	02(03f)	4, 3 homes out of 111 (2.7%) exceeded AL	3, 1 home out of 37 (2.7%) exceeded AL	0.4, 1 home out of 100 (1%) exceeded AL	Corrosion of household plumbing systems
Nickel (ppb)	NE	NE	100	02 (h)	ND	0.6 (0.4 - 0.6)	ND	Corrosion of bronze
Nitrate (as N) (ppm)	10	10	10	04	ND	6 (ND - 6)	ND	Erosion of natural deposits; Runoff from fertilizer use
Nitrite (as N) (ppm)	1	1	1	04	ND	ND	ND	Erosion of natural deposits; Runoff from fertilizer use
Selenium (ppb)	50	50	50	02 (h)	ND	0.3 (ND - 0.3)	ND	Erosion of natural deposits
Sodium (ppm)	NE	NE	160	02 (h)	35 (27 - 35)	24 (14 - 24)	20	Erosion of natural deposits and sea water
Thallium (ppb)	2	0.5	2	02 (h)	ND	0.4 (ND - 0.4)	ND	Discharge from electronics, glass and drug factories
RADIOACTIVE CONTAMINANTS								
Alpha Emitters (pCi/L)	15	0	15	03 (h)	4.7 (0.7 - 4.7)	7.2 (1.2 - 7.2)	0.6	Erosion of natural deposits
Combined Radium (pCi/L)	5	0	5	03 (h)	0.9 (0.3 - 0.9)	1.2 (0.4 - 1.2)	NT	Erosion of natural deposits
Uranium (µg/L)	30	0	30	03 (h)	1.1 (0.2 - 1.1)	3.3 (ND - 3.3)	NI	Erosion of natural deposits

footnotes

- (a) MCL = Maximum Contaminant Level
(b) Federal Goal = MCLG = Maximum Contaminant Level Goal
(c) The MCL for total coliform bacteria states that drinking water must not show the presence of coliform bacteria in ≥ 5% of monthly samples.

A minimum of 390 samples for total coliform bacteria testing are collected each month from the Main distribution system (65 samples from the South Dade Water Supply distribution system) in order to demonstrate compliance with regulations.
(d) A total of 48 samples for Total Trihalomethane and Haloacetic Acid testing are collected per year from the Main distribution system (20 samples from the South Dade Water Supply distribution system) in order to demonstrate compliance with State regulations. Compliance is based on a running annual average. This is the value which precedes the parentheses.
(e) 90th percentile value reported. If the 90th percentile value does not exceed the AL (i.e., less than 10% of the homes have levels above the AL), the system is in compliance and is utilizing the prescribed corrosion control measures.
(f) The 02/03 data presented for the Main System and South Dade System respectively is from the most recent testing conducted in accordance with regulations. Both systems are under reduced monitoring which only requires testing every three years. The Norwood plant system was tested in 2004.
(g) Fluoride testing to demonstrate compliance with State regulations is required every three years in accordance with the State's monitoring framework. However, fluoride levels are monitored daily for the Main System treatment plants where fluoride is added to promote strong teeth.
(h) Data presented is from the most recent testing conducted in accordance with regulations. Testing for this parameter is required every three years in accordance with the State's regulatory monitoring framework. The Norwood plant system was tested in 2004.

abbreviations

- AL Action Level
MRDL Maximum Residual Disinfectant Level
MRDLG Maximum Residual Disinfectant Level Goal
N/A Not Applicable
ND Not Detected
NE None/Established
pCi/L picoCuries per Liter
ppb Parts per billion or micrograms per liter (µg/L)
ppm Parts per million or milligrams per liter (mg/L)
() Ranges (low - high) are given in parentheses where applicable

The value preceding the parentheses is the highest detected level reported for the monitoring period except for disinfection byproducts and disinfectants, where the running annual average is reported.
NT Not tested

definitions

- Maximum Contaminant Level Goal (MCLG)** – The level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.

Maximum Contaminant Level (MCL) – The highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.

Maximum Residual Disinfectant Level Goal (MRDLG) – The level of a drinking water disinfectant below which there is no known or expected risk to health. MRDLGs do not reflect the benefits of the use of disinfectants to control microbial contaminants.

Maximum Residual Disinfectant Level (MRDL) – The highest level of a disinfectant allowed in drinking water. There is convincing evidence that the addition of a disinfectant is necessary to control microbial contaminants

- Action Level (AL)** – The concentration of a contaminant which, if exceeded, triggers treatment or other requirements which a water system must follow.

Detect – The presence of a contaminant at or above the minimum detection level of the test method.

ND – Not detected; indicates that the substance was not found by laboratory analysis.

Parts per million (ppm) or milligrams per liter (mg/l) – one part by weight of analyte to 1 million parts by weight of the water sample.

Parts per billion (ppb) or micrograms per liter (µg/l) – one part by weight of analyte to 1 billion parts by weight of the water sample.

PicoCuries per liter (pCi/L) – measure of the radioactivity of water.



For Customers With Special Health Concerns

Some people may be more vulnerable to contaminants in drinking water than the general population. Persons whose immune systems are compromised due to chemotherapy, organ transplantation, HIV/AIDS or other immune system disorders, some elderly people and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline 1-800-426-4791.

2004 Radon Data Summary

PARAMETER	FEDERAL MCL (a)	FEDERAL GOAL (b)	STATE MCL	YEAR TESTED	MAIN SYSTEM	SOUTH DADE WATER SUPPLY SYSTEM	AVENTURA/ NORWOOD	MAJOR SOURCES
Radon (pCi/L)	NE	NE	NE	04	117 (2 - 117)	209 (46 - 209)	48	Naturally occurring in soil and rock formations